

SEQUENCE LISTING

<110> Lees, Ann M.
 Lees, Robert S.
 Law, Simon W.
 Arjona, Anibal A.

<120> NOVEL LOW DENSITY LIPOPROTEIN BINDING
 PROTEINS AND THEIR USE IN DIAGNOSING AND TREATING
 ATHEROSCLEROSIS

<130> 10797-004001

<140> US 09/616,289

<141> 2000-07-14

<150> US 09/517,849

<151> 2000-03-02

<150> US 08/979,608

<151> 1997-11-26

<150> US 60/031,930

<151> 1996-11-27

<150> US 60/048,547

<151> 1997-06-03

<160> 53

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<212> PRT

<213> Oryctolagus cuniculus

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Gly	Gln	Ala	Gly	Pro	Asp	Glu	Gly	Glu	Val	Asp	Ser	Cys	Leu	Arg	Gln
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Gly	Asn	Met	Thr	Ala	Ala	Leu	Gln	Ala	Ala	Leu	Lys	Asn	Pro	Pro	Ile
	50					55					60				
Asn	Thr	Arg	Ser	Gln	Ala	Val	Lys	Asp	Arg	Ala	Gly	Ser	Ile	Val	Leu
	65				70					75				80	
Lys	Val	Leu	Ile	Ser	Phe	Lys	Ala	Gly	Asp	Ile	Glu	Lys	Ala	Val	Gln
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Ser	Leu	Asp	Arg	Asn	Gly	Val	Asp	Leu	Leu	Met	Lys	Tyr	Ile	Tyr	Lys
				100				105					110		
Gly	Phe	Glu	Ser	Pro	Ser	Asp	Asn	Ser	Ser	Ala	Val	Leu	Leu	Gln	Trp
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<213> Oryctolagus cuniculus
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			20					25					30				
Tyr	Leu	Gly	Gly	Ser	Ser	Gly	Ala	Gly	Gly	Arg	Leu	Thr	Arg	Gly	Arg		
		35				40						45					
Val	Gln	Gly	Leu	Leu	Glu	Glu	Glu	Ala	Ala	Ala	Arg	Gly	Arg	Leu	Glu		
	50				55						60						
Arg	Thr	Arg	Leu	Gly	Ala	Leu	Ala	Leu	Pro	Arg	Gly	Asp	Arg	Pro	Gly		
65				70						75					80		
Arg	Ala	Pro	Pro	Ala	Ala	Ser	Ala	Arg	Ala	Ala	Arg	Asn	Lys	Arg	Ala		
				85					90					95			
Gly	Glu	Glu	Arg	Val	Leu	Glu	Lys	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu
			100					105						110			
Asp	Asp	Glu	Asp	Asp	Asp	Asp	Asp	Val	Val	Ser	Glu	Gly	Ser	Glu	Val		
		115				120						125					
Pro	Glu	Ser	Asp	Arg	Pro	Ala	Gly	Ala	Gln	His	His	Gln	Leu	Asn	Gly		
	130					135					140						
Gly	Glu	Arg	Gly	Pro	Gln	Thr	Ala	Lys	Glu	Arg	Ala	Lys	Glu	Trp	Ser		
145				150						155					160		
Leu	Cys	Gly	Pro	His	Pro	Gly	Gln	Glu	Glu	Gly	Arg	Gly	Pro	Ala	Ala		
				165				170						175			
Gly	Ser	Gly	Thr	Arg	Gln	Val	Phe	Ser	Met	Ala	Ala	Leu	Ser	Lys	Glu		
			180					185					190				
Gly	Gly	Ser	Ala	Ser	Ser	Thr	Thr	Gly	Pro	Asp	Ser	Pro	Ser	Pro	Val		
		195				200						205					
Pro	Leu	Pro	Pro	Gly	Lys	Pro	Ala	Leu	Pro	Gly	Ala	Asp	Gly	Thr	Pro		
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Phe	Gly	Cys	Pro	Ala	Gly	Arg	Lys	Glu	Lys	Pro	Ala	Asp	Pro	Val	Glu		
225				230						235					240		
Trp	Thr	Val	Met	Asp	Val	Val	Glu	Tyr	Phe	Thr	Glu	Ala	Gly	Phe	Pro		
			245						250					255			
Glu	Gln	Ala	Thr	Ala	Phe	Gln	Glu	Gln	Glu	Ile	Asp	Gly	Lys	Ser	Leu		
			260				265						270				
Leu	Leu	Met	Gln	Arg	Thr	Asp	Val	Leu	Thr	Gly	Leu	Ser	Ile	Arg	Leu		
		275				280						285					
Gly	Pro	Ala	Leu	Lys	Ile	Tyr	Glu	His	His	Ile	Lys	Val	Leu	Gln	Gln		
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Gly	His	Phe	Glu	Asp	Asp	Asp	Pro	Glu	Gly	Phe	Leu	Gly					
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<212> PRT

<213> Oryctolagus cuniculus

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 Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp
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 Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg
 35 40 45
 Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro
 50 55 60
 Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His
 65 70 75 80
 Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg
 85 90 95
 Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser
 100 105 110
 Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro Gly
 115 120 125
 Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro Ala
 130 135 140
 Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
 145 150 155 160
 Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
 165 170 175
 Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
 180 185 190
 Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
 195 200 205
 Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
 210 215 220
 Asp Asp Pro Glu Gly Phe Leu Gly
 225 230

<210> 4

<211> 252

<212> PRT

<213> Oryctolagus cuniculus

<400> 4

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 Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly
 20 25 30
 Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp
 35 40 45
 Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro
 50 55 60
 Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly
 65 70 75 80
 Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu
 85 90 95
 Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly
 100 105 110
 Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly
 115 120 125

Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro
 130 135 140
 Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe
 145 150 155 160
 Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp
 165 170 175
 Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu
 180 185 190
 Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu
 195 200 205
 Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly
 210 215 220
 Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly
 225 230 235 240
 His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
 245 250

<210> 5

<211> 557

<212> PRT

<213> *Oryctolagus cuniculus*

<400> 5

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 20 25 30
 Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
 35 40 45
 Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
 50 55 60
 Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
 65 70 75 80
 Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
 85 90 95
 Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
 100 105 110
 Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
 115 120 125
 Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu
 130 135 140
 Ile Arg Thr Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
 145 150 155 160
 Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
 165 170 175
 Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
 180 185 190
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205
 Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
 210 215 220
 Asp His Leu Arg Gly Glu His Ser Lys Ala Ile Leu Ala Arg Ser Lys
 225 230 235 240
 Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys
 245 250 255
 Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Lys Arg Lys Glu
 260 265 270

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Val Thr Ser His Phe Gln Met Thr Leu Asn Asp Ile Gln Leu Gln Met
      275                      280                      285
Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu
      290                      295                      300
Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu
      305                      310                      315                      320
Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu
      325                      330                      335
Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu
      340                      345                      350
Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
      355                      360                      365
Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
      370                      375                      380
Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
      385                      390                      395                      400
Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
      405                      410                      415
Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr
      420                      425                      430
Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala Glu
      435                      440                      445
Glu Lys Thr Leu Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile
      450                      455                      460
Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn Asp
      465                      470                      475                      480
Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Pro Val
      485                      490                      495
Ser Asp Ser Gly Pro Glu Arg Arg Pro Glu Pro Ala Thr Thr Ser Lys
      500                      505                      510
Glu Gln Gly Val Glu Gly Pro Gly Ala Gln Val Pro Asn Ser Pro Arg
      515                      520                      525
Ala Thr Asp Ala Ser Cys Cys Ala Gly Ala Pro Ser Thr Glu Ala Ser
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Gly Gln Thr Gly Pro Gln Glu Pro Thr Thr Ala Thr Ala
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<210> 6

<211> 151

<212> PRT

<213> Homo sapiens

<400> 6

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      20                      25                      30
Gly Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln
      35                      40                      45
Gly Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile
      50                      55                      60
Asn Thr Lys Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu
      65                      70                      75                      80
Lys Val Leu Ile Ser Phe Lys Ala Asn Asp Ile Glu Lys Ala Val Gln
      85                      90                      95
Ser Leu Asp Lys Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys
      100                      105                      110

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Gly Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Met Leu Leu Gln Trp
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 His Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val
 130 135 140
 Leu Thr Ala Arg Lys Thr Val
 145 150

<210> 7
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 7
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 Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu Ser
 20 25 30
 Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg Gly
 35 40 45
 Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly Pro
 50 55 60
 His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly Thr
 65 70 75 80
 Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr Ala
 85 90 95
 Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro
 100 105 110
 Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro
 115 120 125
 Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val Met
 130 135 140
 Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr
 145 150 155 160
 Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln
 165 170 175
 Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu
 180 185 190
 Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu
 195 200 205
 Asp Asp Asp Pro Asp Gly Phe Leu Gly
 210 215

<210> 8
 <211> 530
 <212> PRT
 <213> Homo sapiens

<400> 8
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 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 35 40 45
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 50 55 60
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly

65	70										75					80				
Glu	Asp	Gly	Ala	Gln	Gly	Glu	Pro	Ala	Glu	Pro	Glu	Asp	Ala	Glu	Lys					
				85					90					95						
Ser	Arg	Thr	Tyr	Val	Ala	Arg	Asn	Gly	Glu	Pro	Glu	Pro	Thr	Pro	Val					
			100					105					110							
Val	Tyr	Gly	Glu	Lys	Glu	Pro	Ser	Lys	Gly	Asp	Pro	Asn	Thr	Glu	Glu					
		115					120					125								
Ile	Arg	Gln	Ser	Asp	Glu	Val	Gly	Asp	Arg	Asp	His	Arg	Arg	Pro	Gln					
	130					135					140									
Glu	Lys	Lys	Lys	Ala	Lys	Gly	Leu	Gly	Lys	Glu	Ile	Thr	Leu	Leu	Met					
145					150					155					160					
Gln	Thr	Leu	Asn	Thr	Leu	Ser	Thr	Pro	Glu	Glu	Lys	Leu	Ala	Ala	Leu					
				165					170						175					
Cys	Lys	Lys	Tyr	Ala	Glu	Leu	Leu	Glu	Glu	His	Arg	Asn	Ser	Gln	Lys					
			180					185					190							
Gln	Met	Lys	Leu	Leu	Gln	Lys	Lys	Gln	Ser	Gln	Leu	Val	Gln	Glu	Lys					
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Asp	His	Leu	Arg	Gly	Glu	His	Ser	Lys	Ala	Val	Leu	Ala	Arg	Ser	Lys					
	210					215					220									
Leu	Glu	Ser	Leu	Cys	Arg	Glu	Leu	Gln	Arg	His	Asn	Arg	Ser	Leu	Lys					
225					230					235					240					
Glu	Glu	Gly	Val	Gln	Arg	Ala	Arg	Glu	Glu	Glu	Glu	Lys	Arg	Lys	Glu					
				245					250						255					
Val	Thr	Ser	His	Phe	Gln	Val	Thr	Leu	Asn	Asp	Ile	Gln	Leu	Gln	Met					
			260					265					270							
Glu	Gln	His	Asn	Glu	Arg	Asn	Ser	Lys	Leu	Arg	Gln	Glu	Asn	Met	Glu					
		275					280					285								
Leu	Ala	Glu	Arg	Leu	Lys	Lys	Leu	Ile	Glu	Gln	Tyr	Glu	Leu	Arg	Glu					
	290					295					300									
Glu	His	Ile	Asp	Lys	Val	Phe	Lys	His	Lys	Asp	Leu	Gln	Gln	Gln	Leu					
305					310					315					320					
Val	Asp	Ala	Lys	Leu	Gln	Gln	Ala	Gln	Glu	Met	Leu	Lys	Glu	Ala	Glu					
				325					330					335						
Glu	Arg	His	Gln	Arg	Glu	Lys	Asp	Phe	Leu	Leu	Lys	Glu	Ala	Val	Glu					
			340					345					350							
Ser	Gln	Arg	Met	Cys	Glu	Leu	Met	Lys	Gln	Gln	Glu	Thr	His	Leu	Lys					
		355					360					365								
Gln	Gln	Leu	Ala	Leu	Tyr	Thr	Glu	Lys	Phe	Glu	Glu	Phe	Gln	Asn	Thr					
	370					375					380									
Leu	Ser	Lys	Ser	Ser	Glu	Val	Phe	Thr	Thr	Phe	Lys	Gln	Glu	Met	Glu					
385					390					395					400					
Lys	Met	Thr	Lys	Lys	Ile	Lys	Lys	Leu	Glu	Lys	Glu	Thr	Thr	Met	Tyr					
				405					410					415						
Arg	Ser	Arg	Trp	Glu	Ser	Ser	Asn	Lys	Ala	Leu	Leu	Glu	Met	Ala	Glu					
			420					425					430							

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Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Val Leu Leu Gln Trp His
 115 120 125

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 Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val Leu
 130 135 140 145

act gca agg aaa acc gtg tagcctggca ggaacgggtg cctgccgggg 540
 Thr Ala Arg Lys Thr Val
 150

agcgggagct gccggtacaa agacaaaaaac gccagatgc cgcgcgtgcc ctgtgggcgg 600
 cgtctgttcc cagcttcgct ttttcccttt cccgtgtctg tcaggattac ataaggtttc 660
 ccttcgtgag aatcggagtg gcgcagaggg tccgtgtcat acgcgccgtg cgtccggctg 720
 tgtaagaccc ctgccttcag tgccttgag caacggtagc gtgtcgccgg ctgggtttgg 780
 ttttgcgtg gaggatctg gtcagaattt gaggccagtt tccctaactca ttgctggtca 840
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 ctcttccctt atttaagcag agtgagtttc tggaaaccagt ggtgcccccc cccccgccc 960
 ggccgccgtc ctgctcaagg gaagcctccc tgcagagcag cagagccccct gggcaggagc 1020
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<211> 1617

<212> DNA

<213> *Oryctolagus cuniculus*

<220>

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<400> 11

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cgg gcc ggc ggc ccg gcg cgg ccc gtg agc ctg cgg gaa gtc gtg cgc 96
 Arg Ala Gly Gly Pro Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg
 20 25 30

tac ctc ggg ggt agc agc ggc gct ggc ggc cgc ctg acc cgc ggc cgc 144
 Tyr Leu Gly Gly Ser Ser Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
 35 40 45

gtg cag ggt ctg ctg gaa gag gag gcg gcg gcg cgg ggc cgc ctg gag 192
 Val Gln Gly Leu Leu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
 50 55 60

cgc acc cgt ctc gga gcg ctt gcg ctg ccc cgc ggg gac agg ccc gga 240
 Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly
 65 70 75

cgg gcg cca ccg gcc gcc agc gcc cgc gcg gcg cgg aac aag aga gct	288
Arg Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala	
80 85 90 95	
ggc gag gag cga gtg ctt gaa aag gag gag gag gag gag gag gag gaa	336
Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu	
100 105 110	
gac gac gag gac gac gac gac gac gtc gtg tcc gag ggc tcc gag gtg	384
Asp Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val	
115 120 125	
ccc gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc	432
Pro Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly	
130 135 140	
ggc gag cgc ggc ccg cag acc gcc aag gag cgg gcc aag gag tgg tcc	480
Gly Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser	
145 150 155	
ctg tgt ggc ccc cac cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg	528
Leu Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala	
160 165 170 175	
ggc agt ggc acc cgc cag gtg ttc tcc atg gcg gcc ttg agt aag gag	576
Gly Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu	
180 185 190	
ggg gga tca gcc tct tcc acc acc ggg cct gac tcc ccg tcc ccg gtg	624
Gly Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val	
195 200 205	
cct ttg ccc ccc ggg aag cca gcc ctc cca gga gcc gat ggg acc ccc	672
Pro Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro	
210 215 220	
ttt ggc tgc cct gcc ggg cgc aaa gag aag ccg gca gac ccc gtg gag	720
Phe Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu	
225 230 235	
tgg aca gtc atg gac gtc gtg gag tac ttc acc gag gcg ggc ttc cct	768
Trp Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro	
240 245 250 255	
gag caa gcc acg gct ttc cag gag cag gag atc gac ggc aag tcc ctg	816
Glu Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu	
260 265 270	
ctg ctc atg cag cgc acc gat gtc ctc acc ggc ctg tcc atc cgc ctg	864
Leu Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu	
275 280 285	
ggg cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag	912
Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln	
290 295 300	
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Ala	Ser	Ala	Arg	Ala	Ala	Arg	Asn	Lys	Arg	Ala	Gly	Glu	Glu	Arg	Val		
1			5			10			15								
ctt	gaa	aag	gag	gag	gag	gag	gag	gag	gag	gaa	gac	gac	gag	gac	gac	96	
Leu	Glu	Lys	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asp	Glu	Asp	Asp		
			20			25			30								
gac	gac	gac	gtc	gtg	tcc	gag	ggc	tcg	gag	gtg	ccc	gag	agc	gat	cgt	144	
Asp	Asp	Asp	Val	Val	Ser	Glu	Gly	Ser	Glu	Val	Pro	Glu	Ser	Asp	Arg		
35						40						45					
ccc	gcg	ggc	gcg	cag	cat	cac	cag	ctg	aat	ggc	ggc	gag	cgc	ggc	cgc	192	
Pro	Ala	Gly	Ala	Gln	His	His	Gln	Leu	Asn	Gly	Gly	Glu	Arg	Gly	Pro		
50						55			60								
cag	acc	gcc	aag	gag	cgg	gcc	aag	gag	tgg	tcg	ctg	tgt	ggc	ccc	cac	240	
Gln	Thr	Ala	Lys	Glu	Arg	Ala	Lys	Glu	Trp	Ser	Leu	Cys	Gly	Pro	His		
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cct	ggc	cag	gag	gaa	ggg	cgg	ggg	ccg	gcc	gcg	ggc	agt	ggc	acc	cgc	288	
Pro	Gly	Gln	Glu	Glu	Gly	Arg	Gly	Pro	Ala	Ala	Gly	Ser	Gly	Thr	Arg		
			85						90			95					
cag	gtg	ttc	tcc	atg	gcg	gcc	ttg	agt	aag	gag	ggg	gga	tca	gcc	tct	336	
Gln	Val	Phe	Ser	Met	Ala	Ala	Leu	Ser	Lys	Glu	Gly	Gly	Ser	Ala	Ser		
			100						105			110					
tcg	acc	acc	ggg	cct	gac	tcc	ccg	tcc	ccg	gtg	cct	ttg	ccc	ccc	ggg	384	
Ser	Thr	Thr	Gly	Pro	Asp	Ser	Pro	Ser	Pro	Val	Pro	Leu	Pro	Pro	Gly		
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 Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
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 Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
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 Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
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 Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
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atc tat gag cac cat atc aag gtg ctg cag cag ggt cac ttc gag gac 672
 Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
 210 215 220

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 Asp Asp Pro Glu Gly Phe Leu Gly
 225 230

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<213> *Oryctolagus cuniculus*

<220>

<221> CDS

<222> (1)...(756)

<400> 13

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 Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly
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Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu Asp	
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Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro	
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gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc ggc	240
Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly	
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Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu	
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Cys Gly Pro His Pro Gly Gln Glu Gly Arg Gly Pro Ala Ala Gly	
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Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly	
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Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro	
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Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe	
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Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp	
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Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu	
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Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu	
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Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly	
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cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag ggt	720
Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly	
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cac ttc gag gac gat gac ccg gaa ggc ttc ctg gga tgagcacaga	766
His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly	
245 250	

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<212> DNA

<213> *Oryctolagus cuniculus*

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<222> (61)...(1731)

<400> 14

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Met Lys Asn Gln Asp Lys Lys Asn Gly Ala Ala Lys Gln Pro Asn Pro
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aaa agc agc ccg gga cag ccg gaa gca gga gcg gag gga gcc cag ggg      156
Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Ala Glu Gly Ala Gln Gly
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cgg ccc ggc cgg ccg gcc ccc gcc cga gaa gcc gaa ggt gcc agc agc      204
Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
             35             40             45

cag gct ccc ggg agg ccg gag ggg gct caa gcc aaa act gct cag cct      252
Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
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ggg gcg ctc tgt gat gtc tct gag gag ctg agc cgc cag ttg gaa gac      300
Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
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Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
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Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
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cgc gcc tat gtg gca agg aat ggg gag ccg gag ccg ggc acc cca gta      444
Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
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gtc aat ggc gag aag gag acc tcc aag gca gag ccg ggc acg gaa gag      492
Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu

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Cys	Lys	Lys	Tyr	Ala	Glu	Leu	Leu	Glu	Glu	His	Arg	Asn	Ser	Gln	Lys	
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Gln	Met	Lys	Leu	Leu	Gln	Lys	Lys	Gln	Ser	Gln	Leu	Val	Gln	Glu	Lys	
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Asp	His	Leu	Arg	Gly	Glu	His	Ser	Lys	Ala	Ile	Leu	Ala	Arg	Ser	Lys	
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Glu	Gln	His	Asn	Glu	Arg	Asn	Ser	Lys	Leu	Arg	Gln	Glu	Asn	Met	Glu	
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Glu	His	Ile	Asp	Lys	Val	Phe	Lys	His	Lys	Asp	Leu	Gln	Gln	Gln	Leu	
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Val	Asp	Ala	Lys	Leu	Gln	Gln	Ala	Gln	Glu	Met	Leu	Lys	Glu	Ala	Glu	
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Met

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Val Leu Ile Ser Phe Lys Ala Asn Asp Ile Glu Lys Ala Val Gln Ser	
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ctg gac aag aat ggt gtg gat ctc cta atg aag tat att tat aaa gga	456
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Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Met Leu Leu Gln Trp His	
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 Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu
 180 185 190

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 195 200 205

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 Glu Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly
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agc agc cag gct cct cgg aag ccg gag ggg gct caa gcc aga acg gct 143
 Ser Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala
 35 40 45

cag tct ggg gcc ctt cgt gat gtc tct gag gag ctg agc cgc caa ctg 191
 Gln Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu
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 Glu Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro
 65 70 75

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Lys Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro	
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gta gtc tat gga gag aag gaa ccc tcc aag ggg gat cca aac aca gaa	383
Val Val Tyr Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu	
115 120 125	
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Glu Ile Arg Gln Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro	
130 135 140	
cag gag aag aaa aaa gcc aag ggt ttg ggg aag gag atc acg ttg ctg	479
Gln Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu	
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Met Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala	
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ctg tgc aag aag tat gct gaa ctg ctg gag gag cac cgg aat tca cag	575
Leu Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln	
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Lys Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu	
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530

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<212> PRT

<213> Oryctolagus cuniculus

<400> 23

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Gly	Gly	Asp	Gly	Gln	Ala	Gly	Pro	Asp	Glu	Gly	Glu	Val	Asp		
			20					25					30		

<210> 24

<211> 6

<212> PRT

<213> Oryctolagus cuniculus

<400> 24

Asp	Glu	Gly	Glu	Val	Asp
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<210> 25

<211> 16

<212> PRT

<213> Oryctolagus cuniculus

<400> 25

Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asp	Glu	Asp	Asp	Asp	Asp	Asp
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<210> 26

<211> 28

<212> PRT

<213> Oryctolagus cuniculus

<400> 26

Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asp	Glu	Asp	Asp	Asp	Asp	Asp
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Val	Val	Ser	Glu	Gly	Ser	Glu	Val	Pro	Glu	Ser	Asp				
			20					25							

<210> 27

<211> 12

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<213> Oryctolagus cuniculus

<400> 27

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<210> 28

<211> 10

<212> PRT

<213> Oryctolagus cuniculus

<400> 28

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<210> 29

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 <212> DNA
 <213> *Homo sapiens*

<400> 30
 gaagaggaag aagatgatga tgaagatgaa gatgaagaag atgat 45

<210> 31
 <211> 78
 <212> DNA
 <213> *Homo sapiens*

<400> 31
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 gaagtgcccg agagtgac 78

<210> 32
 <211> 33
 <212> DNA
 <213> *Homo sapiens*

<400> 32
 gtgtcagagg gctctgaagt gcccgagagt gac 33

<210> 33
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 <212> DNA
 <213> *Homo sapiens*

<400> 33
 gaggatgatg accccgatgg cttcttaggc 30

<210> 34
 <211> 90
 <212> DNA
 <213> *Homo sapiens*

<400> 34
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 caggccggggc ccgacgaggg cgaggtggac 90

<210> 35
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 <212> DNA
 <213> *Homo sapiens*

<400> 35
 gacgagggcg aggtggac 18

<210> 36
 <211> 48
 <212> DNA
 <213> Homo sapiens

<400> 36
 gaggaggagg aggaggagga ggaagacgac gaggacgacg acgacgac 48

<210> 37
 <211> 84
 <212> DNA
 <213> Homo sapiens

<400> 37
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 ggctcggagg tgcccagagag cgat 84

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 <212> DNA
 <213> Homo sapiens

<400> 38
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<210> 39
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 <212> DNA
 <213> Homo sapiens

<400> 39
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<400> 40
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<210> 41
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 <212> PRT
 <213> Homo sapiens

<400> 41
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<400> 42

21

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Thr	Thr	Ala	Ala	Ala	Ala	Ser	Ser	Ser	Ala	Ala	Ser	Pro	His	Tyr	Gln
			20					25					30		
Glu	Trp	Ile	Leu	Asp	Thr	Ile	Asp	Ser	Leu	Arg	Ser	Arg	Lys	Ala	Arg
		35					40					45			
Pro	Asp	Leu	Glu	Arg	Ile	Cys	Arg	Met	Val	Arg	Arg	Arg	His	Gly	Pro
	50					55					60				
Glu	Pro	Glu	Arg	Thr	Arg	Ala	Glu	Leu	Glu	Lys	Leu	Ile	Gln	Gln	Arg
65					70					75					80
Ala	Val	Leu	Arg	Val	Ser	Tyr	Lys	Gly	Ser	Ile	Ser	Tyr	Arg	Asn	Ala
				85					90					95	
Ala	Arg	Val	Gln	Pro	Pro	Arg	Arg	Gly	Ala	Thr	Pro	Pro	Ala	Pro	Pro
			100					105					110		
Arg	Ala	Pro	Arg	Gly	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro
		115					120					125			
Pro	Thr	Pro	Ala	Pro	Pro	Pro	Pro	Pro	Ala	Pro	Val	Ala	Ala	Ala	Ala
	130					135					140				
Pro	Ala	Arg	Ala	Pro	Arg	Ala	Ala	Ala	Ala	Ala	Ala	Thr	Ala	Pro	Pro
145					150					155					160
Ser	Pro	Gly	Pro	Ala	Gln	Pro	Gly	Pro	Arg	Ala	Gln	Arg	Ala	Ala	Pro
				165					170					175	
Leu	Ala	Ala	Pro	Pro	Pro	Ala	Pro	Ala	Ala	Pro	Pro	Ala	Val	Ala	Pro
			180					185					190		
Pro	Ala	Gly	Pro	Arg	Arg	Ala	Pro	Pro	Pro	Ala	Val	Ala	Ala	Arg	Glu
		195					200					205			
Pro	Pro	Leu	Pro	Pro	Pro	Pro	Gln	Pro	Pro	Ala	Pro	Pro	Gln	Gln	Gln
	210					215					220				
Gln	Pro	Pro	Pro	Pro	Gln	Pro	Gln	Pro	Pro	Pro	Glu	Gly	Gly	Ala	Val
225					230					235					240
Arg	Ala	Gly	Gly	Ala	Ala	Arg	Pro	Val	Ser	Leu	Arg	Glu	Val	Val	Arg
				245					250					255	
Tyr	Leu	Gly	Gly	Ser	Gly	Gly	Ala	Gly	Gly	Arg	Leu	Thr	Arg	Gly	Arg
			260					265					270		
Val	Gln	Gly	Leu	Leu	Glu	Glu	Glu	Ala	Ala	Ala	Arg	Gly	Arg	Leu	Glu
		275					280					285			
Arg	Thr	Arg	Leu	Gly	Ala	Leu	Ala	Leu	Pro	Arg	Gly	Asp	Arg	Pro	Gly
	290					295					300				
Arg	Ala	Pro	Pro	Ala	Ala	Ser	Ala	Arg	Pro	Ser	Arg	Ser	Lys	Arg	Gly
305					310					315					320
Gly	Glu	Glu	Arg	Val	Leu	Glu	Lys	Glu	Glu	Glu	Glu	Asp	Asp	Asp	Glu
				325					330					335	
Asp	Glu	Asp	Glu	Glu	Asp	Asp	Val	Ser	Glu	Gly	Ser	Glu	Val		

385 390 395 400
 Thr Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr
 405 410 415
 Ala Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro
 420 425 430
 Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys
 435 440 445
 Pro Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val
 450 455 460
 Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala
 465 470 475 480
 Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met
 485 490 495
 Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala
 500 505 510
 Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe
 515 520 525
 Glu Asp Asp Asp Pro Asp Gly Phe Leu Gly
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<210> 44

<211> 546

<212> PRT

<213> Homo sapiens

<400> 44

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 Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
 35 40 45
 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 50 55 60
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 65 70 75 80
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly
 85 90 95
 Glu Asp Gly Ala Gln Gly Glu Pro Ala Glu Pro Glu Asp Ala Glu Lys
 100 105 110
 Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro Val
 115 120 125
 Val Asn Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu Glu
 130 135 140
 Ile Arg Gln Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
 145 150 155 160
 Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
 165 170 175
 Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
 180 185 190
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205
 Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
 210 215 220
 Asp His Leu Arg Gly Glu His Ser Lys Ala Val Leu Ala Arg Ser Lys
 225 230 235 240
 Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys

96

gag tgg atc ctg gac acc atc gac tcg ctg cgc tcg cgc aag gcg cgg	144
Glu Trp Ile Leu Asp Thr Ile Asp Ser Leu Arg Ser Arg Lys Ala Arg	
35 40 45	
ccg gac ctg gag cgc atc tgc cgg atg gtg cgg cgg cgg cac ggc cgg	192
Pro Asp Leu Glu Arg Ile Cys Arg Met Val Arg Arg Arg His Gly Pro	
50 55 60	
gag ccg gag cgc acg cgc gcc gag ctc gag aaa ctg atc cag cag cgc	240
Glu Pro Glu Arg Thr Arg Ala Glu Leu Glu Lys Leu Ile Gln Gln Arg	
65 70 75 80	
gcc gtg ctc cgg gtc agc tac aag ggg agc atc tcg tac cgc aac gcg	288
Ala Val Leu Arg Val Ser Tyr Lys Gly Ser Ile Ser Tyr Arg Asn Ala	
85 90 95	
gcg cgc gtc cag ccg ccc cgg cgc gga gcc acc ccg ccg gcc ccg ccg	336
Ala Arg Val Gln Pro Pro Arg Arg Gly Ala Thr Pro Pro Ala Pro Pro	
100 105 110	
cgc gcc ccc cgc ggg gcc ccc gcc gcc gcc gcc gcc gcc gcc gcg ccg ccg	384
Arg Ala Pro Arg Gly Ala Pro Ala Ala Ala Ala Ala Ala Ala Pro Pro	
115 120 125	
ccc acg ccc gcc ccg ccg cca ccg ccc gcg ccc gtc gcc gcc gcc gcc	432
Pro Thr Pro Ala Pro Pro Pro Pro Pro Ala Pro Val Ala Ala Ala Ala	
130 135 140	
ccg gcc cgg gcg ccc cgc gcg gcc gcc gcc gcc gcc gcc aca gcg ccc ccc	480
Pro Ala Arg Ala Pro Arg Ala Ala Ala Ala Ala Ala Ala Thr Ala Pro Pro	
145 150 155 160	
tcg cct ggc ccc gcg cag ccg ggc ccc cgc gcg cag ccg gcc gcg ccc	528
Ser Pro Gly Pro Ala Gln Pro Gly Pro Arg Ala Gln Arg Ala Ala Pro	
165 170 175	
ctg gcc gcg ccg ccg ccc gcg cca gcc gct ccc ccg gcg gtg gcg ccc	576
Leu Ala Ala Pro Pro Pro Ala Pro Ala Ala Pro Pro Ala Val Ala Pro	
180 185 190	
ccg gcc ggc ccg cgc cgc gcc ccc ccg ccc gcc gtc gcc gcc ccg gag	624
Pro Ala Gly Pro Arg Arg Ala Pro Pro Pro Ala Val Ala Ala Arg Glu	
195 200 205	
ccg ccg ctg ccg ccg ccg cca cag ccg ccg gcg ccg cca cag cag cag	672
Pro Pro Leu Pro Pro Pro Pro Gln Pro Pro Ala Pro Pro Gln Gln Gln	
210 215 220	
cag ccg ccg ccg ccg cag cca cag ccg ccg ccg gag ggg ggc gcg gtg	720
Gln Pro Pro Pro Pro Gln Pro Gln Pro Pro Pro Glu Gly Gly Ala Val	
225 230 235 240	
ccg gcc ggc ggc gcg gcg cgg ccc gtg agc ctg ccg gaa gtc gtg cgc	768
Arg Ala Gly Gly Ala Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg	
245 250 255	

tac ctc ggg ggc agc ggc ggc gcc ggc ggt cgc cta acc cgc ggc cgc Tyr Leu Gly Gly Ser Gly Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg 260 265 270	816
gtg cag ggg ctg ctg gag gag gag gcg gcg gct cga ggc cgt ctg gag Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu 275 280 285	864
cgc acc cgt ctc gga gcg ctt gcg ctg ccc cgc ggg gac agg ccc gga Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly 290 295 300	912
cgg gcg ccg ccg gcc gcc agc gcc cgc ccg tct cgc agc aag aga ggt Arg Ala Pro Pro Ala Ala Ser Ala Arg Pro Ser Arg Ser Lys Arg Gly 305 310 315 320	960
gga gaa gag cga gta ctt gag aaa gaa gag gaa gaa gat gat gat gaa Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Asp Asp Asp Glu 325 330 335	1008
gat gaa gat gaa gaa gat gat gtg tca gag ggc tct gaa gtg ccc gag Asp Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu 340 345 350	1056
agt gac cgt cct gca ggt gcc cag cac cac cag ctt aac ggc gag cgg Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg 355 360 365	1104
gga cct cag agt gcc aag gag agg gtc aag gag tgg acc ccc tgc gga Gly Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly 370 375 380	1152
ccg cac cag ggc cag gat gaa ggg ccg ggg cca gcc ccg ggc agc ggc Pro His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly 385 390 395 400	1200
acc cgc cag gtg ttc tcc atg gca gcc atg aac aag gaa ggg gga aca Thr Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr 405 410 415	1248
gct tct gtt gcc acc ggg cca gac tcc ccg tcc ccc gtg cct ttg ccc Ala Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro 420 425 430	1296
cca ggc aaa cca gcc cta cct ggg gcc gac ggg acc ccc ttt ggc tgt Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys 435 440 445	1344
ccg ccc ggg cgc aaa gag aag cca tct gat ccc gtc gag tgg acc gtg Pro Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val 450 455 460	1392
atg gat gtc gtc gaa tat ttt act gag gct gga ttc ccg gag cag gcg Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala 465 470 475 480	1440
aca gct ttc caa gag cag gaa att gat ggc aaa tct ttg ctg ctc atg	1488

Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met
 485 490 495

cag cgc aca gat gtg ctc acc ggc ctg tcc atc cgc ctc ggg cca gcc 1536
 Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala
 500 505 510

ctg aaa atc tac gag cac cac atc aag gtg ctt cag caa ggc cac ttt 1584
 Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe
 515 520 525

gag gat gat gac ccc gat ggc ttc tta ggc 1614
 Glu Asp Asp Asp Pro Asp Gly Phe Leu Gly
 530 535

<210> 46
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 <212> DNA
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<400> 46

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aaa agc agc cca gga caa ccg gaa gca gga ccc gag gga gcc cag gag 96
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Pro Glu Gly Ala Gln Glu
 20 25 30

cgg ccc agc cag gcg gct cct gca gta gaa gca gaa ggt ccc ggc agc 144
 Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
 35 40 45

agc cag gct cct cgg aag ccg gag ggt gct caa gcc aga acg gct cag 192
 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 50 55 60

tct ggg gcc ctt cgt gat gtc tct gag gag ctg agc cgc caa ctg gaa 240
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 65 70 75 80

gac ata ctg agc aca tac tgt gtg gac aat aac cag ggg ggc ccc ggc 288
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly
 85 90 95

gag gat ggg gca cag ggt gag ccg gct gaa ccc gaa gat gca gag aag 336
 Glu Asp Gly Ala Gln Gly Glu Pro Ala Glu Pro Glu Asp Ala Glu Lys
 100 105 110

tcc cgg acc tat gtg gca agg aat ggg gag cct gaa cca act cca gta 384
 Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro Val
 115 120 125

gtc	aat	gga	gag	aag	gaa	ccc	tcc	aag	ggg	gat	cca	aac	aca	gaa	gag	432
Val	Asn	Gly	Glu	Lys	Glu	Pro	Ser	Lys	Gly	Asp	Pro	Asn	Thr	Glu	Glu	
	130					135					140					
atc	cgg	cag	agt	gac	gag	gtc	gga	gac	cga	gac	cat	cga	agg	cca	cag	480
Ile	Arg	Gln	Ser	Asp	Glu	Val	Gly	Asp	Arg	Asp	His	Arg	Arg	Pro	Gln	
145					150					155					160	
gag	aag	aaa	aaa	gcc	aag	ggg	ttg	ggg	aag	gag	atc	acg	ttg	ctg	atg	528
Glu	Lys	Lys	Lys	Ala	Lys	Gly	Leu	Gly	Lys	Glu	Ile	Thr	Leu	Leu	Met	
				165					170					175		
cag	aca	ttg	aat	act	ctg	agt	acc	cca	gag	gag	aag	ctg	gct	gct	ctg	576
Gln	Thr	Leu	Asn	Thr	Leu	Ser	Thr	Pro	Glu	Glu	Lys	Leu	Ala	Ala	Leu	
			180					185					190			
tgc	aag	aag	tat	gct	gaa	ctg	ctg	gag	gag	cac	cgg	aat	tca	cag	aag	624
Cys	Lys	Lys	Tyr	Ala	Glu	Leu	Leu	Glu	Glu	His	Arg	Asn	Ser	Gln	Lys	
	195					200						205				
cag	atg	aag	ctc	cta	cag	aaa	aag	cag	agc	cag	ctg	gtg	caa	gag	aag	672
Gln	Met	Lys	Leu	Leu	Gln	Lys	Lys	Gln	Ser	Gln	Leu	Val	Gln	Glu	Lys	
	210					215					220					
gac	cac	ctg	cgc	ggg	gag	cac	agc	aag	gcc	gtc	ctg	gcc	cgc	agc	aag	720
Asp	His	Leu	Arg	Gly	Glu	His	Ser	Lys	Ala	Val	Leu	Ala	Arg	Ser	Lys	
225					230					235					240	
ctt	gag	agc	cta	tgc	cgt	gag	ctg	cag	cgg	cac	aac	cgc	tcc	ctc	aag	768
Leu	Glu	Ser	Leu	Cys	Arg	Glu	Leu	Gln	Arg	His	Asn	Arg	Ser	Leu	Lys	
				245					250					255		
gaa	gaa	ggg	gtg	cag	cgg	gcc	cgg	gag	gag	gag	gag	aag	cgc	aag	gag	816
Glu	Glu	Gly	Val	Gln	Arg	Ala	Arg	Glu	Glu	Glu	Glu	Lys	Arg	Lys	Glu	
			260					265					270			
gtg	acc	tcg	cac	ttc	cag	gtg	aca	ctg	aat	gac	att	cag	ctg	cag	atg	864
Val	Thr	Ser	His	Phe	Gln	Val	Thr	Leu	Asn	Asp	Ile	Gln	Leu	Gln	Met	
		275					280					285				
gaa	cag	cac	aat	gag	cgc	aac	tcc	aag	ctg	cgc	caa	gag	aac	atg	gag	912
Glu	Gln	His	Asn	Glu	Arg	Asn	Ser	Lys	Leu	Arg	Gln	Glu	Asn	Met	Glu	
	290					295					300					
ctg	gct	gag	agg	ctc	aag	aag	ctg	att	gag	cag	tat	gag	ctg	cgc	gag	960
Leu	Ala	Glu	Arg	Leu	Lys	Lys	Leu	Ile	Glu	Gln	Tyr	Glu	Leu	Arg	Glu	
305					310					315					320	
gag	cat	atc	gac	aaa	gtc	ttc	aaa	cac	aag	gac	cta	caa	cag	cag	ctg	1008
Glu	His	Ile	Asp	Lys	Val	Phe	Lys	His	Lys	Asp	Leu	Gln	Gln	Gln	Leu	
				325					330					335		
gtg	gat	gcc	aag	ctc	cag	cag	gcc	cag	gag	atg	cta	aag				

gag cgg cac cag cgg gag aag gat ttt ctc ctg aaa gag gca gta gag 1104
 Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
 355 360 365

tcc cag agg atg tgt gag ctg atg aag cag caa gag acc cac ctg aag 1152
 Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
 370 375 380

caa cag ctt gcc cta tac aca gag aag ttt gag gag ttc cag aac aca 1200
 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
 385 390 395 400

ctt tcc aaa agc agc gag gta ttc acc aca ttc aag cag gag atg gaa 1248
 Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
 405 410 415

aag atg act aag aag atc aag aag ctg gag aaa gaa acc acc atg tac 1296
 Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr
 420 425 430

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Variable	Mean	Standard Deviation	Minimum	Maximum
Age	34.5	10.2	22	55
Gender	0.5	0.5	0	1
Marital Status	0.6	0.5	0	1
Education	12.5	1.5	10	15
Income	3500	1500	1000	7000
Health	0.8	0.2	0	1
Smoking	0.3	0.5	0	1
Alcohol	0.2	0.4	0	1
Exercise	0.4	0.5	0	1
Stress	0.6	0.5	0	1
Sleep	0.7	0.3	0	1
Work	0.8	0.2	0	1
Family	0.9	0.1	0	1
Friends	0.7	0.4	0	1
Hobbies	0.6	0.5	0	1
Travel	0.5	0.5	0	1
Volunteering	0.4	0.5	0	1
Religion	0.3	0.5	0	1
Politics	0.2	0.4	0	1
Philosophy	0.1	0.3	0	1
Art	0.4	0.5	0	1
Music	0.3	0.5	0	1
Sports	0.2	0.4	0	1
Gardening	0.1	0.3	0	1
Cooking	0.3	0.5	0	1
Reading	0.4	0.5	0	1
Writing	0.2	0.4	0	1
Acting	0.1	0.3	0	1
Dancing	0.1	0.3	0	1
Fishing	0.1	0.3	0	1
Hiking	0.2	0.4	0	1
Cycling	0.1	0.3	0	1
Swimming	0.1	0.3	0	1
Boating	0.1	0.3	0	1
Golfing	0.1	0.3	0	1
Tennis	0.1	0.3	0	1
Baseball	0.1	0.3	0	1
Soccer	0.1	0.3	0	1
Basketball	0.1	0.3	0	1
Volleyball	0.1	0.3	0	1
Table Tennis	0.1	0.3	0	1
Badminton	0.1	0.3	0	1
Chess	0.1	0.3	0	1
Bridge	0.1	0.3	0	1
Card Games	0.1	0.3	0	1
Board Games	0.1	0.3	0	1
Video Games	0.1	0.3	0	1
Mobile Games	0.1	0.3	0	1
TV Shows	0.1	0.3	0	1
Movies	0.1	0.3	0	1
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Switch	0.1	0.3	0	1
Access Point	0.1	0.3	0	1
Network Card	0.1	0.3	0	1
Firewall	0.1	0.3	0	1
Antivirus	0.1	0.3	0	1
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VPN Server	0.1	0.3	0	1
VPN Gateway	0.1	0.3	0	1
VPN Firewall	0.1	0.3	0	1
VPN Access Point	0.1	0.3	0	1
VPN Network Card	0.1	0.3	0	1
VPN Firewall	0.1	0.3	0	1
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Variable	Mean	SD	Min	Max
Age	34.5	10.2	21	55
Gender	1.2	0.4	1	2
Marital status	1.5	0.5	1	3
Education	12.5	1.5	9	16
Income	1.8	0.8	1	3
Occupation	1.5	0.5	1	3
Health status	1.5	0.5	1	3
Stress level	2.5	1.0	1	4
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
Self-efficacy	3.5	1.0	1	5
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Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
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Self-efficacy	3.5	1.0	1	5
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Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
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Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
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Self-efficacy	3.5	1.0	1	5
Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
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Emotional stability	3.5	1.0	1	5
Prosocial behavior	3.5	1.0	1	5
Life satisfaction	3.5	1.0	1	5
Resilience	4.5	1.0	1	5
Optimism	3.5	1.0	1	5
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